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THE CATHEDRAL OF ALBI, (THE CITY OF THE ALBIGENSES,) IN FRANCE.

ALBY, IN FRANCE.

THE ALBIGENSES.—PERSECUTIONS OF THE EARLY REFORMERS.

ALBY, or Albi, is a town in the south of France, situate about 350 miles from Paris, and in very nearly the same longitude as that metropolis. It stands upon the left or south bank of the river Tarn, which is one of the affluents of the Garonne, and is the capital of the department which derives the name of Tarn from that river. It is an ancient town: under the dominion of the Romans it bore the name of *Albiga*, or *Albia*; but it was of small importance then, as it lay at a distance from the great roads which traversed the country. Previous to the French revolution, it was comprised within the province of Languedoc; and the neighbouring country to a short distance around the town was called Albigeois. The surrounding district is now the *arrondissement* of Albi, which comprises more than 550 square miles, and has a population of nearly 80,000 inhabitants. The town itself has between 11,000 and 12,000 inhabitants, who are engaged in some trifling manufactures. It is the seat of an archbishopric; but notwithstanding its civil and ecclesiastical rank, it is one of the most uninteresting and ill-built towns of its size in France, possessing scarcely any object worthy of notice, with the exception of a fine promenade, which is raised upon a terrace on the outside of the town, and the ancient cathedral which forms the subject of our engraving in the preceding page.

The see of Alby is of great antiquity. We are told that when Christianity was introduced into this part of Gaul, the *Albienses* or *Albigenses* embraced it with enthusiasm, and that a bishopric, which was established in their town, became in a short space of time very celebrated. A cathedral church was soon erected, and dedicated to the Holy Cross. The remains of this primitive edifice are still to be seen near the present palace of the archbishop, close to the bank of the Tarn. The existing cathedral was commenced in the year 1282, by the then Bishop Bernard de Castanet, who assigned for its construction the twentieth part of his annual revenues, for the space of twenty years, and induced the chapter to follow his example. Yet in spite of his liberality, seconded as it was by the efforts of some of his successors, the work went on, as was too often the case with other cathedrals, in a slow and lingering manner: it was not completed till 1512; that is to say, till after the lapse of 230 years from the period of its foundation. During the frenzy of the French Revolution, this edifice was about to be sacrificed to the spirit of economy and atheism.

In those disastrous times, (says a French writer,) when France was under the yoke imposed by the Committee of Public Safety, the cathedral of Albi was placed in the number of national domains, the property of which was to be alienated. The authorities seemed even in haste to mark the day for the sale of this edifice, and announced that those who became the purchasers should within a specified period pull down its walls. But a *savant* (M. Mariès), worthy of commendation for his talents and his labours, watched in some manner over this fine monument. Alarmed at the resolution taken by the Directory of the Department of Tarn, he wrote to those who composed it: he pointed out the impropriety of the projected sale; he spoke like a skilful architect of the beauty of the edifice, and showed that the national glory was going to be compromised by ignorant or ill-intentioned men. This generous proceeding, which in those days of mourning and of terror might have marked out a new victim for the executioner, was crowned with unlooked-for success.

Our engraving will convey an idea of the external appearance of this cathedral, which is remarkable

chiefly for its solidity and regularity. It is wholly destitute of those delicate ornaments which generally decorate the Gothic edifices of the thirteenth and fourteenth centuries,—except upon the southern side, on which is to be seen a very beautiful portal. The tower rises to the height of more than 400 feet above the level of the river Tarn, whose waters wash the little hill upon which the church stands. The interior of the edifice has nothing worthy of especial notice, except some old paintings, and a fine organ.

On the whole, the town of Alby possesses within itself so few objects of interest, that it would have little to recommend it to our notice, were its name not inseparably associated in our minds with those ardent and ill-fated reformers who, as early as the twelfth century of the Christian era, obtained the distinction of being persecuted by the Church of Rome. The appellation of *Albigenses* is generally said to have been formed from *Albiga*, the Latin name of Alby; but some derive it from *Albigesium*, which was the general denomination of Narbonese Gaul in the middle ages. The reason for which the town should have given a name to these people is variously stated: some say that it was from the prevalence of their opinions in its vicinity,—others, that it was because those opinions were condemned at a council held in Alby in 1176,—and others again, because the first of the Provençal lords against whom the army of the persecutors marched, was Raymond Roger, Viscount of Alby, &c.

When the persecution of the Albigenses commenced, France was not as it now is, an entire monarchy subject to one king; on the contrary, it was then, as it had long previously been during the feudal period, subject to the influence of four kings, to each of whom several grand vassals were subordinate. Philip Augustus reigned in the north, or was king of France proper; that is to say, it was his descendants who afterwards became sovereigns of the whole French territory. Towards the west was an English France; on the east a German France; and in the south a Spanish or Aragonese France. Until the reign of Philip Augustus, the first of these divisions was the least extensive, the least rich, and the least powerful; but that monarch, by a concurrence of fortunate circumstances, rather than by his talents, as Sismondi says, greatly exalted the splendour of his crown, and extended his dominion over a portion of France much more important than that which he had inherited from his predecessors. These acquisitions were made at the expense of the King of England; and at the beginning of the thirteenth century, Philip Augustus had conquered more than half of the English France. But the German and the Aragonese France still retained their limits; the former had become even more attached to the empire, and the latter formed a part of the independent dominions of the King of Aragon.

Nominally, however, Philip Augustus was the sovereign lord, not only of the territory which he actually ruled, but likewise of English France and of Aragonese France. Like the King of England, the King of Aragon was regarded as a French prince. The greater part of his states,—even beyond the Pyrenees, and as far as the river Ebro,—had belonged to the ancient monarchy of Charlemagne; and thus he, as the holder of them, was considered to owe homage to the crown of France, of which Philip Augustus was the possessor. Like the King of England, too, the King of Aragon had acquired, either by marriages, or by grants of fief, or by treaties of protection, dominion over a great number of French lords; some of whom did homage to the King of

France, and others to the emperor, but all of whom rendered actual obedience only to the King of Aragon himself. Thus the Pyrenees were not then, as they now are, a boundary between the monarchies of France and Spain; but the countries on either side of them,—that is to say, the south of France, and the north-east of Spain,—were subject to one king.

The countries thus dependent upon the King of Aragon were peopled by an industrious and intelligent race of men, addicted to commerce and the arts, and still more to poetry. At an early period, even in ancient history, the south of France had been refined by colonies from Greece: under the dominion of the Romans its progress was rapid; and even in the dark period of the feudal ages, it was far advanced in civilization beyond the comparatively barbarous districts of the North. The language which this people had formed for themselves was the far-famed "Provençal": it was a mixture of Roman and Teutonic, and was remarkable for clearness, tenderness, sweetness, and copiousness,—or as Sismondi says, comparing it with the Walloon Roman, or French, it was distinguished by more harmonious inflexions, by a richer vocabulary, by expressions more picturesque, and by greater flexibility.

This language, (he continues,) studied by all the genius of the age, appeared at that moment destined to become the first and most elegant of the languages of modern Europe. Those who used it had renounced the name of Frenchmen for that of Provençals: they had endeavoured by means of their language to form themselves into a nation, and to separate themselves absolutely from the French, to whom they were indeed inferior in the arts of war, but whom they greatly excelled in all the attainments of civilization. The numerous courts of the small princes, amongst whom these countries were divided, aspired to be models of taste and politeness. The cities were numerous and flourishing. Their forms of government were all nearly republican; they had consuls chosen by the people, and had long possessed the privilege of forming communes, which rendered them nearly equal to the Italian republics with which they traded.

In the midst of this growing prosperity, the lovely region of the south of France was delivered to the fury of countless hordes of fanatics; its cities ruined, its population consumed by the sword, its commerce destroyed, its arts thrown back into barbarism, and its dialect degraded from the rank of a poetic language to the condition of a vulgar jargon. To the Church of Rome belongs the undisputed and the undivided guilt of these atrocities. The King of France had no share in originally instigating the persecution, though he stepped in to complete the work; and accepting from the popes the territory which they had confiscated, thus extended the dominion of the French crown to the Mediterranean Sea.

In those countries which used the Provençal tongue, the clergy had been enriched by immense endowments. The wealthy bishoprics were generally reserved for the members of powerful families, who led disorderly lives, whilst the curates and inferior priests, taken from among the vassals of the nobility, their peasants and their slaves, retained the brutality, the ignorance, and the baseness, of their servile origin. The vices of the ecclesiastics excited the disgust of the people, whose feelings were familiarly expressed in significant proverbs. *I would rather be a priest than have done such a thing*, was a phrase in common use among them. Nevertheless, the disposition of the people, we are told, was towards religion; and that devotion which they could not find within the pale of the Romish Church, they sought for amongst the Sectaries, who were numerous in the province.

It is difficult to ascertain what were the opinions held by those who, under the name of Albigenes,

were persecuted by the Roman Catholics. Upon this point, it is necessary to bear in mind the remark of Sismondi, that "those very persons who punished the Sectaries with frightful torments, have alone taken upon themselves to make us acquainted with their opinions." The Catholics persecuted them to annihilation: they destroyed, also, their documents, and thus rendered it impossible for them to speak, as it were, in their own defence. We cannot, therefore, be astonished that the Roman Catholic writers, in seeking to justify the proceedings of their Church, should have painted the victims of its cruelty in the blackest colours, and should have represented their opinions to us "with all those characters which might render them the most monstrous, mingled with all the fables which would serve to irritate the minds of the people against those who professed them." Yet even these interested witnesses allow that the opinions of their adversaries had been transmitted in Gaul from generation to generation, almost from the very origin of Christianity.

In other words, (to use the language of an English writer,) that the pure and original principles of Christianity had been handed down in Gaul from the first planting of that religion there,—that the people had, as far as their opportunities would allow, resisted the usurpations and corruptions of the Church of Rome,—and that the Albigenes were the inheritors of those principles, mingled doubtless with various errors which their slender means of true religious instruction would not allow them to escape.

It is the opinion of Sismondi, that amidst many puerile or calumnious tales, it is still easy to recognise the principles of the Reformation of the sixteenth century amongst the "heretics," who are designated by the name of Albigenes. Undoubtedly, many sects existed at the same time in the province,—a state of things which was the necessary consequence of that freedom of inquiry which formed the essence of their doctrine; but upon this vital point they were all agreed,—that the Church of Rome had absolutely perverted Christianity, and that the authority which she so arrogantly assumed in spiritual matters, was unlawful. This was their real crime in the eyes of the Romanists: they were the formidable enemies of the Church of Rome, because, to use the language of a monk who became Inquisitor-general in the middle of the thirteenth century,—

They had a great appearance of godliness; because they lived righteously before men, believed rightly of God in all things, and held all the articles of the Creed; yet they hated and reviled the Church of Rome, and in their accusations, they were easily believed by the people.

It is remarkable that while their enemies charged them with practising all kinds of disorders in secret, they allowed them to be exemplary in open life.

Towards the close of the twelfth century, the heretical opinions, as they were deemed, which prevailed so extensively in Provence, had attracted the attention of the Romish authorities. Pope Innocent the Third, who ascended the pontifical throne, full of vigour and ambition, in 1198, was the first who appeared to feel fully their importance. "As incapable of temporising as he was of pity," both his character and his policy led him to the conclusion that the Church of Rome ought to keep no terms with those who dissented from her doctrines,—that if it failed to crush them, to exterminate their race, and thus to strike Christendom with terror, their example would soon be followed, and the fermentation of mind which was everywhere manifest, would shortly produce a conflagration throughout the Roman world. The province of Narbonne was especially the object of his attention; and he sent into it in the first year of his pontificate, two monks, who may be considered

as having laid the foundations of the Inquisition, though that tribunal was not organized till 1233. These *inquisitors*, as they were commonly called, were charged to disperse the Sectaries, to burn their leaders, and to confiscate the property of all who would not conform to the Roman standard of faith. They traversed the province, accompanied by a number of friars, and engaged in disputation with those whom they sought either to bring back within the pale of the Roman Church, or to visit with capital punishment. They caused judges of these intellectual contests to be named beforehand; and, according to their own account, they always came off victorious.

Accustomed to the subtleties of the schools, they pressed their adversaries with captious questions, or unlooked-for conclusions, and not unfrequently led them to absurd declarations. Diego d'Azebez, Bishop of Ozma, and his companion St. Dominic, under-prior of his cathedral, who, about the year 1204, fixed themselves in the province to preach against the heretics, had much success in this kind of disputation. It even appears that sometimes they were out of patience with their adversaries for being so unskilful. But when the missionaries had embarrassed their adversaries, or had vanquished them according to all the scholastic rules, then they said to the inhabitants of the places where they had found them, "Why do you not drive them out? Why do you not exterminate them?" "We cannot," they replied to the Bishop of Ozma; "we have been brought up with them, we have relations with them, we see the goodness of their lives."

The inquisitors, in a short space of time, rendered themselves very obnoxious; and among others, to Raymond the Sixth, Count of Toulouse, within whose territory the Sectaries were numerous. In the Spring of 1207, Raymond was engaged, after the fashion of the times, in a war with certain neighbouring barons. Peter of Castelnau, one of the papal legates, undertook to effect a peace between the contending parties; and, applying first to the barons, obtained from them a promise that if Raymond would acquiesce in certain pretensions of theirs, they would employ all their assembled forces in the extermination of the heretics. The Count of Toulouse very naturally refused his assent to this fanatical arrangement, which required him to surrender what he deemed his rights, in order to purchase the entrance of a hostile army into his states, for the purpose of plundering and killing his vassals at the pleasure of the priests. The legate, in his wrath at this refusal, excommunicated Raymond, laid his country under an interdict, and wrote to the pope to obtain a confirmation of the sentence.

Innocent the Third, eager to commence hostilities, supported his legate in this bold proceeding. He confirmed the sentence, and, on the 29th of May, 1207, addressed Count Raymond in a letter thus:—

If we could open your heart, we should find, and would point out to you, the detestable abominations that you have committed; but as it is harder than the rock, it is in vain to strike it with the words of salvation: we cannot penetrate it. Pestilential man! What pride has seized your heart, and what is your folly, to refuse peace with your neighbours, and to brave the divine laws, by protecting the enemies of the faith? If you do not fear eternal flames, ought you not to dread the temporal chastisements which you have merited by so many crimes?

This letter was followed up by the vigorous attacks of the barons with whom Raymond was at war; and in a short time he was compelled to make peace upon the very terms which he had before refused, thus binding himself to exterminate the heretics from his states. It was towards the close of the same year, 1207, that Innocent for the first time thought of preaching a "crusade" against the Albigenses. Of this measure, and its results, as also of the subsequent proceedings of the Church of Rome towards this people, we shall speak upon future occasions.

POPULAR ILLUSTRATIONS OF LIFE ASSURANCE.

I. INTRODUCTORY REMARKS.

THE "Assurance of a Life," is an expression well known and often used in business, but at the same time very imperfectly understood by the majority of those who are unacquainted with the transactions of commercial life. Although upwards of fifty different societies exist in London for the purpose of granting Policies upon Lives, there are, nevertheless, very many fathers of families, who are wholly ignorant, if not of the existence, at least of the nature of these institutions, and unaware of the possibility of securing a provision for their wives and children, in the event of their death.

Societies for the assurance of the lives of individuals, may be ranked among the very noblest institutions of civilized society, and their usefulness can be attested by thousands of happy and independent families, rescued by their means from the bitterness of poverty and distress. Those persons who are ignorant of the advantages of the institutions referred to, only require, it is presumed, to have the great advantages of them pointed out, in order to embrace with eagerness, so obvious and excellent a method of improving their happiness, and providing against the uncertainty of life.

But there are also many in the world (to whom these papers are more particularly addressed), who, although generally acquainted with the nature of the business transacted at the various offices, are not aware of the real nature of the transactions themselves, or the laws by which they are governed, or capable of judging how far the terms offered to the public are founded on principles of equity.

This very general ignorance of a subject at once so simple in its first principles, and so important in its results, has sometimes led to the expression of opinions the most ridiculous and preposterous, and to the creation of schemes the most visionary, extravagant, and fraudulent. Nor is this want of knowledge confined to a single class; among the highly-educated and better-informed portion of society, the doctrines of Life Assurance and Annuities are but indifferently understood. This strange apathy on so important a subject, is, perhaps, greatly owing to the obscurity and pedantry of many writers, who, in their works upon this subject, have never aimed at being either familiar or elementary, but have rather addressed their discoveries to proficients in the mathematics than to the general reader. They have treated the subject in terms so technical, and have investigated its various problems in a manner so scientific, as to give the doctrine, on a superficial view, the appearance of being exceedingly abstruse, and their researches have apparently embraced such a multitude of different subjects, political, statistical, and mathematical, that many have been deterred from bestowing the time and labour on the subject which it seemed to require. If we look around us, we cannot fail to observe how very many persons are engaged and interested in these transactions. The sale and purchase of Annuities, the transfer of Policies, and the settlement of Securities, are everyday occurrences, and the necessity of being acquainted, with at least the outlines of the subject, must be too apparent to admit of denial.

There are very few of us who, if we have not already been, may not, at some future period of our lives, be directly or indirectly interested in some such transactions; and it is unnecessary to say, how liable those are to suffer from knavery or ignorance, who

are not capable of forming some opinion on the subject. I have, accordingly, undertaken the present series of papers, in the belief that much of the obscurity and apparent difficulty at present appertaining to the subject, will vanish, when it is treated in an easy and familiar manner.

I shall conclude the observations contained in this introductory paper, by giving a general but condensed view of the various sorts of Assurances and Annuities which can be, and commonly are, granted upon lives, with an explanation of such technical terms as belong to this branch of science. It may be, perhaps, proper to add, that, in all future papers upon these subjects, I shall require of my reader no further knowledge of the mathematics, than a very rough and general acquaintance with decimal arithmetic.

An Assurance, in its simplest form, is a contract entered into by a society, to pay, upon the death of an individual, a given sum, varying according to the office, from 20*l.* to 10,000*l.* For this promise, or Assurance, as it is termed, the individual upon his part agrees to pay an equivalent, either in a single sum paid down at once, or in a greater number of smaller sums paid regularly, at yearly or other intervals, during a certain portion or the remainder of his life. It will thus be seen, that two separate interests are engaged; the society stands pledged to the payment of a patrimony to the children of the insurer, and the insurer stands pledged to support the institution by yearly or other contributions.

The Purchase Money, or Premium, as it is called, when paid down at once, is the real value of the Assurance, or, in other words, is such a sum as, being laid out at Compound Interest during the assurer's life, will produce to the Society a sufficient fund to enable them upon his death to discharge his claim. An Annuity in the same way may be purchased during the life of an individual, and the sum paid to the society for such a purpose is termed the value of the Annuity. Annuities may be granted on the joint continuance of two, three, or more lives, in which case the grant is termed, an Annuity on the Joint Lives, and is terminable upon the death of any one of the given number.

Assurances may also be granted upon a like contingency; that is, the sum bargained for becomes payable upon the death of any one of the lives agreed upon. Annuities may also be granted, during the continuance of the longest of two or more lives, in which case the payment of the annuity does not terminate until both or all the lives have fallen. Assurances in like manner granted on these contingencies, are not due until all the lives have become extinct; and in every case, whatever be the number of lives employed, or by whatever name the contingency be called, the sum paid for the purchase of either the Assurance or the Annuity is invariably termed its Value, and is in all cases such a sum as, being laid out at Compound Interest, during the life or lives, will provide the payments guaranteed in the original contract. The only difficulty which exists in the investigation of these contingencies, lies in determining with accuracy the number of years which one individual may expect to live, and the number of years due to lives combined in different numbers and proportions. An Assurance may be purchased, or an Annuity granted, for a term of years, and their present values are consequently somewhat less than the values of Assurances and Annuities, which extend to the whole period of life.

In a future paper I propose to investigate, by a popular method, the probabilities of human life from which all the values are deduced.

P. H

THE MANUFACTURE OF TURNESOLE.

As soon as I reached the vicinity of Gallargues, (a small town in the south of France,) I remarked on the hedges pieces of coarse cloth of a bluish colour, from whence proceeded a disagreeable smell; before the church-door, I also found strips of the same kind of cloth, stretched in the sun. The dye with which this cloth had been prepared was the produce of a preparation from the sun-flower, an employment of which the Gallarguois possess the secret and the monopoly. My curiosity being excited, I took the liberty of interrogating the old man who was employed in guarding these strips, and this is the account he gave me.

We call the plant turnesole, but our doctor tells me that the learned call it *Croton tinctorium*. We have to go a great way to gather it. Some go into Provence, others into the Gardonnecque and the Lower Cevennes; some into Roussillon. Last year, some went into Spain, and one went even to Corsica. When we do not choose to go so far, we scour the country round Gallargues for the space of thirty miles, and we bring back our bundles to the mills in the town. Those who go into Provence, or elsewhere, are usually absent for three months. They take with them their wives and children. When they have reached their destination, they hire a mill, establish themselves there with all their family, and bring back to it every evening, like loaded bees, the plants which they have found. We are very busy during the month before our departure; we must get in the wheat-harvest in the greatest haste, enter into partnership with some friend or relation, hire a mill, buy a beast of burden, and, above all, procure some money, and this is more important, as it is somewhat expensive to be keeping house for three months away from home. Not that we live a jolly life and waste our money; far from it; we are contented with the cheapest food, we sleep in the open air on the edge of the stream near which our animal is fastened, or in barns, when we can get taken in; we walk from twenty-four to twenty-eight miles a day over the fields, under a burning sun, and very often, after having searched everywhere, do not find a single plant of turnesole. Notwithstanding these difficulties, we expect with impatience the time for setting out on our travels. We often set off before the plant is fit to be cut. The turnesole-pickers used to set out at the beginning of April, but now they do not start till the middle of July. We return with colours flying to Gallargues, when we bring in our first bundle, but if we have been unsuccessful, it is in the silence of night that we creep to our homes, to hide our ill-humour.

Light, stony, and sandy soil, is the best suited for the growth of the turnesole, and especially that which has been newly cleared. We carefully conceal the direction we are about to take; it is generally at night that we set out with our partners, each provided with a whip to be used as a signal, for we never keep together. If we wish to let our companion know that we have found some turnesole, we crack our whip; if we would announce our arrival at any fixed spot, it is the whip which apprizes him of the fact.

Here the old turnesole-picker left me, to turn his pieces of cloth; having finished this operation, he returned to me, and said,—

If the cloth did not dry quickly, the dye would run, and our manufacture be rejected. This is the second time that this cloth has been exposed to the sun, and it must be brought here again a third time. "And why repeat this process three times?" I asked, with astonishment. "That a greater quantity of dye may sink into the cloth. This is the process; when our women have soaked them once in the dye, we dry them, after which we stretch them between two layers of horse-dung, which we call *aluminadou*; we leave them there for an hour, till the colour rises, that is, till the pale black of the dye changes to a dark blue. The learned contend that this change is effected by the extinction of the alkaline substance. When taken from the *aluminadou* the cloth is damp; we dry it in the sun, then steep it again in the dye, and, for the third and last time, stretch it in the sun. The manufacture is then completed; but we begin again while there are any plants left, which is till the middle of September, provided no rain has fallen during

the month of August, for then the plant dies. The rain injures the turnsole in August; it is favourable to it in May, and if it does not rain either in May or June, the turnsole-pickers expect a very bad campaign."

My old friend was proceeding, when he was interrupted by a child bringing some of the cloth. "I was about to tell you," he said, "how we obtain the dye from the turnsole, but follow this child to the mill, and you will see the process for yourself."

I proceeded where I was directed; it was an oil-mill. A great many people were employed in it; the women were bruising the plants. Meanwhile, the mill-stone ground the plants and reduced them to a paste; this paste was placed in rush baskets under the press; then two strong men worked the press, and squeezed from the rush basket a greenish juice, which was received in a tub: they mixed with this juice a tenth of urine, and then soaked in it several times the strips of cloth of which I have spoken; they worked them about a good deal before they were completely imbued with it.

When the campaign is finished, they employ themselves also in the vintage. During this time the merchants write into Holland, to make known the quantity of turnsole which has been manufactured; for it is in Holland that this article is used. For a long time it was not known what use it was put to, but we now know that it is used to preserve cheese from worms, to accomplish which, the cheeses are soaked in the juice extracted from the rags. There are about four hundred-weight exported every year. The prices vary from forty to one hundred and eighty francs. It is not with the Gallarguois that the Amsterdam merchants correspond, but with the Montpellier merchants. These confide the purchase to agents at Gallargues, who, to obtain the confidence of both buyers and sellers, favour each side alternately. When they come to make their bargain, the whole town is in commotion.

In former times, the turnsole found wild in the fields was exclusively used; now they sow it. The first attempt was made in Provence; and as it met with complete success, these seed-plots have been introduced at Gallargues.

They choose for this purpose the lightest soil; it must be well trenched in. In May, they draw furrows about a foot apart, and in these they place the seeds, which they are careful to separate about a foot from each other; and then sprinkle earth lightly over them. If rain falls in June, an abundant harvest may be expected. The turnsole arrived at maturity, scatters a quantity of seed, which continues the harvest for three years at least. I was shown a field covered with it, and which resembled a bushy meadow. The cultivation of the turnsole as it is now practised, will necessarily introduce great changes in this trade. The Gallarguois will probably lose the monopoly of it, and considerable abatement will take place in the price, because the quantity will amazingly increase. Thus the old men hate those who originated the idea of cultivating this plant; but the young people, and especially sensible people, rejoice in it, because the manufacture will be much less laborious, and the clear profit greater.

[Translated from *Tableaux de Nîmes*, by EMILIAN FROSSARD, Pastor of the French Protestant Church.]

Idleness is the great corrupter of youth; and the bane and dishonour of middle age. He who, in the prime of life, finds time to hang heavy on his hands, may, with much reason, suspect that he has not consulted the duties which the consideration of his age imposed on him; assuredly he has not consulted his happiness.—BLAIR.

THE PHILOSOPHERS' STONE.

II

It is easier to talk about the folly and danger of credulity, when we observe its baneful effects, as exhibited in the conduct and experience of others, than it is to emancipate our own minds entirely from its influence. So, also, there is less difficulty in deploring, in general terms, the prevalence of certain superstitions, and in acknowledging the intimate connexion which subsists between them and ignorance, than there is in resolutely setting to work and rooting out these indications of weakness, or a defective education, from ourselves. See how we cling to early habits, and how deep and lasting, and how fondly-cherished, are early impressions! Where is the man who deals honestly with his own heart; narrowly watching the motives and secret springs of action, with which a stranger intermeddleth not; who has not frequent occasion to lament the obtrusion of thoughts, and the existence of feelings, whose sources may be traced to the absurdities which occupy so large a space in infancy and childhood?

Let us not be unjust in our censures upon the alchemists. We know it is difficult to understand how men, possessing, on other subjects, more than an ordinary share of intelligence and discrimination, should have made such a complete surrender of their judgments, as to imagine that a piece of lead, or of tin, for instance, could, by the action of fire and the addition of a small portion of some other substance, be converted into gold or silver, according to the will of the operator. But does the charge of folly, of deception, and of credulity combined, as respects the means which have been proposed for acquiring wealth, attach exclusively to the age of alchemy? Were we disposed to do so, we should have no difficulty in selecting instances of a recent date, whose claims upon public confidence, and whose prospects of success as objects of commercial enterprise, justly entitle them to be viewed as furnishing indisputable proofs that the philosophers' stone is still sought after; but that the means devised for its attainment have been somewhat modified, we will not say, improved.

Should there be any doubt as to the analogy we have supposed to exist between some of the schemes put forth in the present day, and those which engaged the attention of the alchemists in reference to the means of obtaining riches, surely it cannot be said, that in their endeavours to obtain a medicine which should cure all diseases, the moderns have been less assiduous or less successful than their predecessors.

In the reign of Henry the Sixth, royal protections were granted to several persons professing to be acquainted with the arts of alchemy. This was done to secure them against certain penalties of an act of parliament passed in the time of that monarch's grandfather, Henry the Fourth, and also from the fury of the people, many of whom believed that the alchemists were assisted in their operations by infernal spirits. The following extract from one of these curious documents will show what were the opinions entertained by the king, and, as we may presume, his ministers also, upon this subject.

Ancient sages and most famous philosophers have taught in their books and writings, under figures and emblems, that many notable and most glorious medicines may be extracted from wine, precious stones, oils, vegetables, animals, metals, and semi-metals; and particularly a certain most precious medicine, which some philosophers have named the Mother and Queen of Medicines, some the Inestimable Glory, others the Quintessence, others the Philosophers' Stone, and others the Elixir of Life. The virtue of this medicine is so admirable and efficacious, that it cures all curable diseases with ease, prolongs human life

to its utmost term, and wonderfully preserves man in health and strength of body, and in the full possession of his memory, and of all the powers and faculties of his mind. It heals all curable wounds without difficulty, is a most sovereign antidote against all poison, and is capable of procuring to us and our kingdom other great advantages, such as the transmutation of other metals into real and fine gold and silver.

That the language here employed is sufficiently extravagant, and that it illustrates the extraordinary influence which the pretended science of alchymy exercised over the imagination, cannot be denied. But before we indulge either in smiles or reproaches at what may, with propriety, be termed the follies of our ancestors, let us be certain that, with all the advantages we possess, as compared with them, we are not guilty of similar acts of folly and credulity, which those who shall succeed us some four or five hundred years hence, may find it very difficult to reconcile with their notions of propriety. In the description just given of the "most precious medicine," let it be observed, that it is said to be capable of curing all *curable* diseases; a pretension which may be considered exceedingly modest, when contrasted with the statements of some of the modern inventors and discoverers of "universal medicines," and "elixirs of life."

Let not these observations be misunderstood. We have no apology to offer for the alchemists, a great number of whom, as we shall notice more fully by and by, were cheats and impostors. Avarice, and a lamentable ignorance of the ordinary phenomena of nature, were the chief causes to which the delusions of alchymy were indebted for their protracted existence. And if we recognise something approaching to a family-likeness between the wild schemes to which we have already alluded, and some of those put forth in the present day, may we not conclude that they all claim the same parentage?

How pleasing it is to turn away from these dark spots, which cast their shadows across the surface of society, and contemplate those ennobling objects of scientific research, and of commercial adventure, for which the age in which we live is so justly distinguished! If there be one thing, above all others, on whose aid we may confidently rely in clearing away the errors, the prejudices, and the superstitions, which have been bequeathed to us (associated with matters of incalculable value,) by our ancestors, it is the stirring spirit of inquiry and of rigid investigation, which pervades every nook and corner of natural and experimental science. And this is a work to which all who wish well to themselves, to their country, and to mankind at large, may give a helping hand. It is the duty of every man to strive to improve, by all the means within his reach, the intellectual faculties with which God has mercifully endowed him. It is a talent committed to our care, and for the use of which we are to be held accountable. There is no greater mistake, and yet we believe it is very common, than to suppose that age, situation in life, or the nature of one's daily avocations, present any real obstacles to the acquisition of knowledge. Difficulties may be found crossing our path almost at every step we take, and it would be strange if they did not. Can anything that is really valuable be obtained without cost, or labour, or difficulty? If in most cases the *hope* of reward sweetens labour, certain it is, that in this instance its *realization* will be found more than an ample recompense for exertion. When health is to be obtained and preserved, only on condition that we submit to a certain course of discipline, how cheerfully do we perform the duty prescribed to us! And shall we be less

careful over the mind, to whose vigorous and healthful exercise discipline is equally essential? It is a symptom of weakness, of indolence, or of self-satisfying credulity, in any man who sits down contented with his present attainments, and vainly imagines there is nothing more worth knowing. Men of the most brilliant intellects, who have laboured in the field of knowledge from the first dawning of reason, to the last day of their earthly existence, have confessed that they have always been learners. The truth is, there is no such thing as standing still where mental operations are concerned. If we are not sure that we are advancing, there is great danger that we are going backwards. A state of indifference and of inactivity is favourable to the progress of error, which, under such circumstances, accumulates upon the mind like cobwebs in an unswept apartment. Hence the necessity of looking around us with an inquiring and scrutinizing glance; avoiding, on the one hand, that extreme sensibility of existing imperfections, which, not unfrequently, occasions doubt and dissatisfaction,—and on the other, a too-ready acquiescence in matters whose importance demands from us the exercise of vigilance, combined with caution and calm deliberation. After all, let us not forget that man at his best state is encompassed with infirmities; never making a more pitiable display of them than when he attempts to explain things by a rule of his own. The mere possession of knowledge is not necessarily accompanied by usefulness and a desire to do good. Moral culture must therefore proceed hand in hand with mental cultivation. If we expect men to understand and to practise the duties they owe to each other and to society at large, they must be taught that they live not for this world alone.

Here we conclude—hoping very shortly to resume our account of the philosophers' stone. If any of our readers think that, on the present occasion, we have said less on this subject than they were led to expect, we ask them to accept as our apology the desire we feel to blend instruction with information.

MAN, in whatever state he may be considered, as well as in every period and vicissitude of life, experiences in religion an efficacious antidote against the ills which oppress him, a shield that blunts the darts of his enemies, and an asylum into which they can never enter. In every event of fortune it excites in his soul a sublimity of ideas, by pointing out to him the best Judge, who, as an attentive spectator of his conflicts, is about to reward him with his inestimable approbation. Religion, also, in the darkest tempest, appears to man as the Iris of peace, and, dissipating the dark and angry storm, restores the wished-for calm, and brings him to the port of safety.—?

WHEN you are disposed to be vain of your mental acquirements, look up to those who are more accomplished than yourself, that you may be fired with emulation; but when you feel dissatisfied with your circumstances, look down on those beneath you, that you may learn contentment.—Dr. MOORE.

MEDITATION is one of our most difficult Christian duties, but, at the same time, it is one of the most important. We can read or hear a dozen of books more easily than we can meditate properly on one; but yet, our inward thoughts are the only tests by which we can know the real state of our minds. Whatever we turn to naturally when alone, is the thing which engrosses most of our regard, and therefore we should often look inwards, to ascertain if our hearts are stored for eternity, and how far they are devoted to the service of God. Religious meditations have been compared to the blossoms on a tree in Spring: many of them fall off, come to nothing, and end in vanity; but yet they are the first things in which spiritual-mindedness consists; and there can be no fruit, good or bad, but what proceeds from our thoughts.—SINCLAIR.

NOTES ON FOREST TREES. No. XVI.

THE ACACIA, (*Robinia pseudo-Acacia*.)

THE Acacia, the Locust-tree of America, was one of the first trees introduced into Europe from the New Continent. We are indebted to J. Robin, a French botanist, from whom it receives its scientific name, for the introduction of this addition to our Sylva, alike deserving of notice for the excellent qualities of its wood, and the beauty of its leaves and flowers. It was brought from Canada, and cultivated in France about the year 1601, in the reign of Henry the Fourth. Since that time it has been planted to a great extent in Germany and Britain.

On the eastern side of the Continent of North America the Acacia, in a wild state, is confined to that part of Pennsylvania which lies between Lancaster and Harrisburg; while on the western side of the mountains, it is found two or three degrees further to the north, and it abounds in all the valleys of the Alleghany chain. The dimensions it attains in its native country vary according to the nature of the soil and the climate. In Virginia and Kentucky it grows to the largest size, sometimes as much as seventy or eighty feet in height, and three or four feet in diameter; but in parts of the country less favourable to its growth, it rarely exceeds one-half that size.

The foliage of the Acacia is extremely light and elegant, and the flowers, which are in the form of pendent bunches, are white and sweetly scented. These blossoms, scattered over a foliage of a delicate and lively green colour, produce a beautiful effect, and render the Acacia a very proper tree for the embellishment of a garden.

When the Acacia has reached a great age, it is covered with a very thick and deeply-cleft bark, and it loses the sharp spines which previously existed on its branches. Its wood is of a greenish-yellow colour, with brown veins, hard, compact, and susceptible of a good polish; it is tolerably strong, but rather brittle. The property for which it is most highly prized in America, is that of resisting the effects of the weather

for a length of time. Its value as timber for enclosures is mentioned by Gilpin, who tells the story of a farmer in Long Island, who planted an ordinary field of fourteen acres with suckers of the Acacia, in the year of his marriage, as a portion for his children. His eldest son married at twenty-two. On this occasion, the farmer cut about three hundred pounds' worth of timber out of his Acacia wood, which he gave his son to buy a settlement in Lancaster county. Three years afterwards, he did as much for a daughter; and thus he provided for his whole family, the wood in the mean time repairing all the losses it received.

About the beginning of the present century, when the rapid growth of the Acacia had induced the Americans to lay out large plantations of this tree, its trunk was attacked by a little insect, which, eating its way into the wood, pierced it in every direction; and what was most extraordinary, this little creature made its appearance in all parts of the United States at the same time. The consequence was, the farmers relinquished the practice of planting the Acacia: the ravages of the insect, however, did not extend to the trees that were growing in a state of nature in the woods.

Michaux, in speaking of the trees of America, notices the good qualities of the Acacia in the following manner:—

If I may be allowed to give my opinion, I should say that the most striking advantages of the Acacia consist, first, in the rapidity of its growth, compared with that of our other native trees, with hard wood. In the second place, in the benefits we receive from its wood, which is applied in America to so many useful purposes. To these advantages it adds another very striking one, which trees of quick growth seldom possess, and which those who have spoken in favour of the Acacia have omitted to notice sufficiently, namely, the power after the third year of turning its pith-wood into heart-wood: this never takes place in the oak, the chestnut, and many other trees, until after ten or fifteen years. From this it follows, that if Acacias are planted at the same time as these last, in a good soil, and cut down at the end of twenty-five or thirty years, they will generally be one-third, and frequently one-half larger than the others, and the trunk will generally be found free from pith-wood, through its whole thickness, and of sufficient size to be applied to many useful purposes.



LEAF AND BLOSSOM OF THE ACACIA.

This tree must not be confounded with the Egyptian thorn, which bears the name of Acacia, and to which its leaves and thorns bear some resemblance: on this account it has been called the *pseudo-Acacia*, false Acacia, for the sake of distinction. In 1720, the tree was scarce in England; but a specimen is noticed growing in Old Palace-Yard, Westminster, and another in front of Russell House, Bloomsbury.

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